



# MAGAZINE

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# THE I.C.I. MAGAZINE

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The *I.C.I. Magazine* is published for the interest of all who work in I.C.I., and its contents are contributed largely by people in I.C.I. It is edited by Richard Keane and printed at The Kynoch Press, Birmingham, and is published every month by Imperial Chemical Industries Limited, 26 Dover Street, London, W.1. Telephone: REGent 5067-8. The editor is glad to consider articles for publication, and payment will be made for those accepted.

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*Front Cover: A view of the finishing post at Henley-on-Thames Regatta, where crews from many parts of the world are competing this month.*

## OUR CONTRIBUTORS

JOCK KENNEDY is a printer of wide experience. He learned the trade with William Collins & Son of Glasgow, and after serving as their assistant Works Manager he migrated to London, where he eventually became Production Manager of the Daily Express books department. He came to The Kynoch Press in 1933 and succeeded Michael Clapham as Manager in 1945. Born in Glasgow, Jock Kennedy still has his heart in his native land, where he spends his holidays every year.

DAVID GUTTMANN joined Paints Division in 1942 and worked at Slough chiefly on research until 1948, when he transferred to the Publicity Department. He is keen on outdoor life, and his travels have taken him to many parts of England and the Continent.

L. H. F. SANDERSON of Central Staff Department is too well known in the Company to need introduction in these notes. It is no exaggeration to say that, as Overseas Personnel Officer, he spends most of his time travelling—a great deal of it by air—in order to meet the people who represent us abroad.

# FIFTY YEAR CHINA

## The Story of Imperial Chemical Industries

Ever since the turn of the century China has been valued customers. Today this trade is virtually at a theless past associations should not be forgotten and us how Brunner, Mond & Company built up a vast m

CHINA is more than a country. It is a sub-continent, with an area of nearly 5,500,000 square miles and a population of over 450 million. It is a land of many spoken dialects, but—and this is at first difficult to understand—has only one written language, employing characters which any educated person anywhere in China understands. Correspondence can therefore be carried on by people who do not even comprehend each other's speech.

The climate and topography of China vary immensely. The south is in the tropics; the north has the cold winters of Siberia. There are huge flat fertile plains, deserts, and some of the highest mountains in the world. It would be almost true to say that this sub-continent can grow every type of cultivated crop or tree.

Although China is an old country with records and a civilisation dating back 4000 years, it is young and backward according to the standards of the modern mechanised world. Farming and village industry are carried on today with the same methods and tools as have been used for centuries. During the last fifty years, however, modern methods of manufacture with the use of up-to-date machinery have increased year by year.

China first engaged in foreign trade on a large scale in the latter half of the last century. But almost every year there has been some kind of calamity on this huge sub-continent—revolution, counter-revolution, banditry, piracy, foreign invaders, civil war, famine, floods, droughts. In 1912 the Manchus were overthrown after ruling for 268 years. This resulted in complete disorganisation of Government for many years, with the result that local warlords ruled in feudal fashion, levying taxes, having their own armies, and waging local wars on their neighbours. In 1927 Chiang Kai-shek, the military leader of the Kuomintang party, marched his army from Canton to Peking and took over the reins of Government which he held until recently, when he was ousted by Mao Tse-tung and the People's Government.



# S IN A

(China) Limited

n one of our most  
standstill. Never-  
d this article tells  
arket in the East.



THE FABULOUS SUMMER PALACE at Peking was built by the Empress Dowager in medieval style in the course of the last century. It is now a public park. This picture shows a small corner of the many buildings on this vast estate, which covers nearly 60,000 acres.



THE SHANGHAI OFFICE of I.C.I. (China)

In addition to internal strife, China has endured invasion. The Japanese attacked China in the undeclared wars of 1931-2 and 1937-45. The struggle between Chiang Kai-shek and Mao Tse-tung has been in progress for very many years, but only came into world news since the end of World War II, when the Nationalist (Kuomintang) Government was driven

off the mainland of China to the island of Taiwan (Formosa). While wars were being fought, the Chinese peasant—and the population of China is largely composed of peasants—suffered severely from natural calamities: loss of crops through floods or droughts, with consequent famine. Relief for the famine-stricken population has been negligible in past years. The starving people have drifted into the big cities to die. But perhaps not the least of the hardships has been the crushing burden of taxation to pay for the civil wars. In China it is the farmers and village shopkeepers who have had to foot the heavy bills.

In view of the unsettled conditions it is not surprising that those of the Company's British staff who have lived in China for ten years or more have more than once been in a danger area. They have known what it is to evacuate wives and families to safe areas and have the office records packed each night ready for flight themselves should disaster strike. In spite





HARVESTING the rice crop in the plains of southern China

of all this unhappy picture work has gone on. If one part of China was unsettled or unsafe, other places were peaceful and pleasant to live and work in.

When the western nations first visited China to trade, the Manchu Government did not look favourably upon the "barbarians." Nevertheless they found that trading with them was very lucrative. Not that they traded themselves, for they were government officials; but the Chinese merchants had to be very generous with their presents if they wished to keep out of trouble and preserve their ears, the loss of which was a popular punishment a hundred years ago. Severe restrictions were placed upon trade, and only certain Chinese merchants were allowed direct contact with the "barbarians." Chinese who were found to be teaching their language to foreigners were liable to execution. The movement of the Europeans in the Chinese cities was restricted to small areas.

The result of these restrictions was that the Chinese learnt pidgin English, which, to a great extent, was the introduction of familiar if corrupted words of English in the Chinese idiom without benefit of grammar. An example is: "master wanchee grass cut top side," which, being translated, is "master requires a hair-cut."

Another outcome of the restrictions was the enforced concession of foreign settlement areas and of extraterritorial rights. The areas given for the foreigners to live in were frequently uninhabited and unhealthy lands, often mud-flats by a river. It was on such an area that Shanghai grew up to become by the early 'thirties one of the biggest shipping ports in the world. Hong Kong, a granite mountain which, when it was ceded to

Britain in 1841, had just a few fishing villages on it, is today one of the major ports of the world.

Perhaps the most important development arising out of trade restriction was that of the comprador system. In the early days the foreign merchant was only able to do business through selected Chinese merchants who were called compradors. In time the comprador joined the foreign merchanting firm and became its most important Chinese member. He did all the trading with his fellow countrymen and guaranteed the payment of their accounts. Even to this day many of the big firms in China have their compradors.

### *The First Sales Office*

Brunner, Mond & Co., Northwich, opened their first China sales office in 1900, in Shanghai. Up to then they had sold their soda ash entirely through local agents. Then, with their own office, they decided to adopt a revolutionary policy: not to engage a comprador, but have direct dealings with the Chinese merchants. This necessitated appointing agents for certain districts who in their turn had their sub-agents. The system was in the course of years extended through the length and breadth of China until practically every part of the country was covered, and as the business extended it became necessary to open additional small company offices.

In the early years these were opened even beyond the borders of China in eastern Siberia at Vladivostok and other places along the Amur river. But in 1920, when foreign firms were no longer permitted to trade in Russian territory, the



offices beyond the Chinese border had to be closed down, our properties there being confiscated.

Until 1920 the China offices of Brunner, Mond & Co. were under the control of the board of directors at Northwich. In that year, in view of the increasing business, it was decided that a great measure of local autonomy was desirable. A subsidiary company under the title of Brunner, Mond & Co. (China) Ltd. was registered under the Hong Kong ordinances on 6th December, with head office in Shanghai.

### *The Old Tradition*

In May 1928 the name of the company was changed to Imperial Chemical Industries (China) Ltd., but because of the very fine reputation which Brunner, Mond & Co. had built up in China the Chinese characters representing phonetically the name "Brunner, Mond" were retained. I.C.I. (China) is therefore still known by the original name among the Chinese.

The foundation of the Company's trade in China was based on alkalis, particularly soda ash; but as the years passed, its interest in other products increased. By the time the name was changed in 1928, I.C.I. (China) were selling agents for a number of other firms whose products, it was considered, were not only profitable but would help the sale of our own products and give better service to customers.

It was in about 1928 that, with increasing business, especially in sulphate of ammonia from Billingham, additional offices were opened and China was organised into six divisions. There were divisional offices at Shanghai, Hong Kong, Hankow, Tsingtao, Tientsin and Dairen controlled by the board of directors in Shanghai. Under the divisional offices were district offices at Canton, Swatow, Amoy and Foochow in South China; Tsinan, Chefoo and Peking in North China; Chungking in the west, and Harbin in Manchuria. Under these fifteen offices a network of Chinese distributors or agents was built up in the small Chinese inland towns.

In order to keep up to date with market requirements and with the activities of our agents it was necessary that there should be visits at regular intervals not only by our Chinese staff but also by Europeans. This entailed a lot of travelling to places in the interior of China. Fifteen years ago, when roads suitable for motor traffic were practically non-existent, travel in China was slow and tedious, but always very interesting. The method was by bullock or mule

cart, sedan chair, sampan, or small motor-launch, depending upon the type of country and district.

The Chinese peasants are very pleasant and friendly. Our local Chinese agents invariably made one welcome and usually gave a Chinese feast in the evening with dishes of native delicacies such as birds' nest soup, pigeons' eggs, sharks' fins, frogs' legs or sea slugs—very often a meal of sixteen dishes washed down with warm rice or kaoliang wine. In recent years, however, motor roads and bus services have been much improved, railways built, and air services inaugurated. This has speeded up the rate of travel and made it in many cases more comfortable, but has detracted from the interest and lessens the chances of getting close to the peasants and farmers, who are always ready to help a strange "foreign devil."

### *A Vast Selling Organisation*

I.C.I. (China) is a merchandising or selling organisation, with no factories in China. It is designed essentially for the purpose of selling the products of the home factories. Our employees are naturally mainly Chinese, with a number of locally born Portuguese, Russians, Poles and (up to the outbreak of World War II) Japanese. The technical staff includes both Chinese and British. They service a wide range of industries. It was in 1918 that Brunner, Mond & Co. took over the agency of Levinstein & Co., who were subsequently incorporated into the British Dyestuffs Corporation. Dyes technicians have ever since been on the staff to teach the Chinese dyers improved methods of dyeing and the use of modern dyestuffs. In recent years, with the advent of sulphate of ammonia on a major



THE TRISHAW or tricycle-driven rickshaw is now displacing in Shanghai the older form of transportation in which coolies ran with their load



scale from Billingham, the technical service staff has been further increased to teach the Chinese farmers how to use modern fertilizers.

When the war started in 1939 many of the British staff wished to join the various services but were not allowed to do so, as the British Government considered that in fostering the export trade they would be of far greater service to Britain than in the Army, Navy or Air Force. It was only in early 1941 that the British Ambassador to China advised firms that, in view of the reduced exports to the Far East, they should allow their employees to volunteer for the services. Quite a number of the staff left Shanghai for India to join the Indian Army.

### *Compulsory Service in Hong Kong*

In Hong Kong, however, the Hong Kong Government brought in compulsory service in 1940. All the British staff, together with many of the Chinese, were trained in the Hong Kong defence force, police or other essential services and were not allowed to leave the colony.

In Shanghai and other parts of China the Allied nationals were allowed a few months' freedom after the Japanese took

over, but by the middle of 1942 they had been shepherded into internment camps where they remained until the Japanese surrender in 1945. In Hong Kong most of the staff were in the armed forces and, after taking part in the three weeks' defence of the colony, therefore became prisoners of war. Some were later sent to Japan to work in factories and quarries.

After the capture of Shanghai the head office of I.C.I. (China) was transferred to London. Nevertheless we still maintained an office in Chungking, which the Japanese never reached, and continued to do business in goods urgently required by the Chinese Government. Supplies were flown from India over the Himalaya Mountains. Our local British staff was reduced to two men, one in Chungking and the other in Calcutta. The remainder were in internment or P.O.W. camps or with the armed forces.

By 1945, when the Japanese surrendered, the British staff, after more than three years of internment under the Japanese, were suffering severely from malnutrition. The loss in weight of some men was unbelievable. Had it not been for parcels sent into the camps by our loyal Chinese staff and friends, at great personal risk to themselves, the sickness and ill health would have been even greater. It was really essential that every man should go on leave to recuperate. Nevertheless the

fittest elected to remain and opened up the more important offices in Shanghai, Hong Kong and Tientsin. These few men very soon obtained repossession of the Company's property, and many of our Chinese and locally engaged European employees, who also had had a very rough time under the Japanese, were re-engaged.

China had been under Japanese conquerors for four years, cut off from the rest of the world, and was very short of supplies of everything. But so, unfortunately, were other countries; and although business—and big business—was offering, I.C.I. (China) was not able to do a great deal at first, due to lack of supplies. This may in a way have been fortunate for the slender skeleton staff on hand. But the shortage of supplies from the United Kingdom caused merchants to turn for their requirements to other parts of the world, especially to the U.S.A.

Business in China after the war was not at all easy. Supplies have been short, competition strong, and import and export regulations changing constantly. Before "liberation" the greatest handicap was the fantastic depreciation of the currency. This gave accountants and directors many a headache. Staff were



A WHEELWRIGHT in his open-air workshop close to the city walls of Peking





A COMMEMORATIVE ARCHWAY just outside the "Forbidden City" of Peking

at one time paid twice a week; and it was essential to spend or "fix" the money immediately, for by next morning the bi-weekly wage might not have been sufficient to buy a box of matches.

After the surrender of the Japanese, the civil war against Mao Tse-tung's forces which had started about eighteen years previously was renewed. This war had previously been confined to the interior of China, well away from the commercial centres. It now gradually spread from north to south as the Nationalist armies were defeated, until the forces of Chiang Kai-shek were driven off the mainland to the former Japanese-controlled island of Formosa, and Mao Tse-tung's "People's Liberation Army" established the People's Government in Peking. The civil war bankrupted the finances of the country, upset communications and so reduced exports from China that no foreign exchange was available for the purchase of machinery, heavy chemicals and other essentials necessary

for the rehabilitation of the country's industries and prosperity. While the future of foreign trade with China still looks dark, I.C.I. (China) feels that, if the international situation permits, it may look forward to another fifty years in China of mutually profitable trading.

During the disorganisation of business through the civil war, and later through the nationalist blockade of the south and central Chinese ports, the importance of the British Colony of Hong Kong, which has always been a centre of entrepot trade, has grown enormously. Many wealthy Chinese merchants from other parts of China have set up offices there, and many new factories have been built and industries established since the war.

In this article an attempt has been made to give a picture of I.C.I. (China)'s history, work, difficulties and troubles. But fifty years is a long time, and China is a big country. The history of I.C.I. (China) could fill volumes.





Scarborough Bay

(Photos: Walkers Studios Ltd.)

## THE THIRTY-FIRST CENTRAL WORKS COUNCIL

THE Thirty-first Meeting of the Central Council was held at Scarborough on 25th May, and a most successful meeting it was too. In the words of the Chairman, Mr. Rogers, "the meeting brightened up and we had a very good day."

This was the first time that Council had met at Scarborough. All the post-war meetings have been at Blackpool, and the pre-war meetings were in London. Scarborough proved to be a most popular choice. When delegates assembled there on Thursday, 24th May, the town was looking its very best: the first sunny warmth of spring was making itself felt, and the view across the sweep of the bay, with its little ships jostling each other alongside the good ship *Hispaniola* of *Treasure Island* fame, seemed to invite everyone to enjoy themselves. Unfortunately, the next morning a cold sea mist blanketed the coast and never lifted all day.

The Chairman's opening speech was simple and sincere. Quite clearly he spoke as he thought, straight from the heart, and the response was obvious. He spoke of the loss of Sir Frederick Bain not only as a friend and as a colleague but to the Company, to the industrial world, and to the country as a whole. He also told us of his friendship with the late Ernest Bevin and the loss that "honesty" had suffered both in Britain and throughout the world by his passing. He gave us a message from Lord McGowan; reminded us of the appointment of Dr. Fleck as a Deputy Chairman of the Company; and with an impish twinkle referred to a section of the Board as the "Gorbals Gang."

He touched on the capacity of the Company in being able to produce from within itself technicians and craftsmen capable of dealing with almost any problem and pointed out that it was one of the real benefits of a large organisation. He



said that he believed that little harm could come to the Company so long as real "goodwill" remained and everyone of us, from the Chairman to the youngest office boy, was willing to give a "square deal."

He ended on a note of general wisdom. Our attitude to the United States must be one of sympathy, toleration and understanding. Only with the United States, Great Britain and the Commonwealth in general agreement, could we hope for "peace in our time."

The next item came suddenly. Mr. Grocott of the Alkali Division got up and asked of the Chairman if he could give an answer to a widespread rumour present in all Divisions: that to commemorate the 25 years of the formation of I.C.I. and possibly as a gesture to coincide with the Festival of Britain year, the Company intended to make to all employees a gift connected in some way with their length of service with the Company.

The Chairman replied that this was the first that he had heard of it: 25 years was not a very long time for a concern, and the answer was that, at the moment, there was no such proposal.

Mr. McCall, the chairman of the Workers' Pre-meeting, then stepped forward and asked leave to withdraw the next two items from the agenda since there had been no support for them at the Workers' Pre-meeting. These referred to a pensions scheme for widows and orphans, which originated from the General Chemicals Division, and the augmentation of workers' pensions particularly in the cases of lower pensions, sponsored by the Salt Division. The meeting accepted the proposal.

On the subject of canteen prices the same procedure was carried out but Mr. Gilmour (Metals) asked leave to put forward an alternative proposal, suggesting that all Works and Division Councils should be asked to consider the desirability of more joint consultation on canteen matters. Mr. Inman (chairman of the Alkali Division) thought this must inevitably lead to delay, particularly if action to be taken had to go through the channels of Works Councils, Divisional Councils and so to the Central Council, and Mr. Zealley (chairman of the Billingham Division) felt that greater use of the various canteen sub-committees should be possible. However, the new motion received a vote of confidence, was accepted by the Chairman and will be referred back to Works Councils.

In view of this it was hardly surprising that the next resolution from the Nobel Division that each Division should be allowed to run its own canteens in its own way, and "to stand on its own feet" as regards prices, was withdrawn.

The last item that arose from the minutes of the previous meeting was the question of some form of payment to cover the period of hardship that occurred after 26 weeks' absence and before resumption of work, and for some modification of the 26 weeks rule. Mr. Hay replied on behalf of the Company and explained that while it was not proposed to make formal alteration to existing arrangements it had been



*The Chairman congratulates the Kynoch first-aid team of Metals Division*

arranged that Labour Officers should make personal contacts so that sick people would have matters explained to them by word-of-mouth rather than by a formal letter, and also that greater use should be made of the I.C.I. Benevolence Grant for helping such cases. The Chairman himself added that the moneys in this fund were not positively fixed and in cases of genuine hardship might be freely drawn upon, subject to the care and judgment of the various Benevolent Grants Committees. Mr. Hastings (Metals) thanked the Board and said he was delighted to find that they had a soul, and so we all felt comforted.

Under "other matters arising" Mr. Quinn (Alkali Division) spoke of the pleasure that the I.C.I. films had given him and suggested that the film entitled *Enterprise* might be taken as typical of efficient and enterprising "private enterprise" and as such was the best answer to any threat of nationalisation.



*A general view of the Works Councillors as they vote on a motion*



*T. McCall (Nobel)**J. U. Gilmour (Metals)**J. Hastings (Metals)**F. W. Quinn (Alkali)*

Mr. Zealley questioned the wisdom of the procedure which allowed a motion on the agenda to be withdrawn as a result of deliberation of "Workers only" whereas the management might—in the interests of joint consultation—wish to be told of the reasons prompting withdrawal of the motion.

Dr. Amor (Principal Medical Officer) then took over the microphone. He announced the official results of the First Aid Competition. The Kynoch team of the Metals Division were first, with Welwyn the runners-up. Before asking the Chairman to present the medals Dr. Amor recorded that during the year he had had four cases brought to his notice where, without any doubt, life had been saved by I.C.I. first-aiders. He congratulated all those who represented their Divisions in the competition and stressed that the examining doctors had made great efforts to introduce realism in the tests. Mr. Jackson (chairman of the Metals Division) then presented the team to Mr. Rogers, who handed them their medals, to the accompaniment of much applause. After this pleasant and rather intimate ceremony, Mr. Grocott (Alkali) made some gentle and quite kindly criticism of certain points in procedure and details of organisation and it was promised to take careful note of them.

In regard to Savings Bank and National Savings Group matters, Mr. Young (Head Office) told us that all was well with the bank and that we could not save too much. How right he is!

After taking the statistics of the I.C.I. Benevolence Grant and the Suggestion Scheme in our stride, the Chairman introduced Mr. K. G. Begg (Managing Director of I.C.I.A.N.Z.) to the conference.

Mr. Begg said how delighted he was to have the honour of attending a meeting of the Central Council. He was an Australian "three deep" and very proud of it but as well as being an Australian he was one of us, not only as a member of the Commonwealth, but also as a member of I.C.I. Britons would always be welcomed in Australia both as visitors and as emigrants if they were of the right stuff. His country was immensely big, people were wanted and, in fact, Australia had only three things to fear—strikes, inflation and their hold on the Ashes.

And so to lunch. And what an excellent lunch we had. The Central Labour Department and Scarborough did us proud both with hotel accommodation and with food throughout the whole conference, but the highlight on the social side was the honour conferred by the presence of the Mayor and the Mayoress. After lunch the Mayor welcomed us, officially, to Scarborough and kept the room in roars of laughter with a most admirable and witty speech. He found himself sitting between two Scots members of the Board, and drew our attention to the fact that some 700 years ago Scarborough Castle had been erected to defend Scarborough from the rapacious Scots. He pointed out that Billingham was but an hour and a half from Scarborough by road and since he had been to Billingham he could not think why more people did not come to Scarborough. He reminded us that Scarborough had some 80 acres of gardens whereas Blackpool—but so far we have avoided this "War of the Roses"!

After lunch we listened to Mr. Chambers on "The I.C.I. Accounts for 1950." It is quite extraordinary how a complicated

*Guest of Honour: K. G. Begg,  
Managing Director, I.C.I.A.N.Z.*





W. H. Hubball (Alkali)



S. P. Chambers



W. M. Inman



A. T. S. Zealley

and difficult subject can be made to live if it is clearly explained by a man who knows his subject and has the gift of using simple language. He took us through the Balance Sheet, drawing our attention to points of interest and importance, and left us with the feeling that we really had a very shrewd idea as to how the Company was run, at any rate financially. He invited questions and answered them with the same ease and certainty and we really felt that we were in the presence of a master of his subject.

A most excellent start to the afternoon.

Sir Ewart Smith then submitted the Safety Report for the year. He drew attention to the tragic increase in deaths during the year and stressed that a decrease both in deaths and in accidents—because one obviously followed the other—could only be achieved if every man and woman played their part. He told us that the Directors had decided to give a trophy to be awarded twice a year to the Division that had the best safety record, adding that a scheme was being worked out to make certain that appropriate “weighting” was given to those Divisions which were known to have the more hazardous jobs. He also warned us of the need to play our part in Civil Defence and reminded us that it was better to be sure rather than sorry. The Government had set in motion civil defence measures and I.C.I. had already begun to train key instructors. Sir Ewart hoped that volunteers would be readily forthcoming when the call came for them in the works.

The report on the Workers' Pension Fund caused no comment, but the Metals resolution that contributions should be in-

creased up to 5% of gross wages caused considerable debate. Mr. Hastings (Metals), who proposed the motion, and Mr. Quinn (Alkali) believed that workers could afford the extra money, but Mr. Allardyce (Billingham) denied this and said that it would be an intolerable burden on the lowest paid worker. There seemed to be little doubt that the general feeling was with Mr. Allardyce and on the motion being put it was defeated by 118 votes to 27 but, by Standing Orders, it will be referred back to Division Councils.

Mr. Lightfoot submitted his report on the Workers' Friendly Society and he was followed by Mr. Hubball who proposed on behalf of the Alkali Division that postal voting for Works Council Elections be permitted to enable employees absent at the time of the election through certified sickness or injury to record their votes. This went through “without touching the sides” and will mean more work for the Labour Department, but who are they to complain?



A conference is thirsty work—the company queue for elevenses





*The ladies relax after the meeting*



*Dr. Mitchell, chairman of Leathercloth Division (centre), has a word with Mr. Ray, personnel director of Billingham Division (right), over a cup of coffee*



*Delegates enjoy a glass of beer*

The Alkali Division's resolution asking that some form of assisted share scheme for employees be put into operation was next proposed by Mr. Hubball and seconded by Mr. Quinn. Mr. Hubball, who, incidentally, was commended by Mr. Chambers for his clear explanation of a complex problem, stressed that the scheme was voluntary, no obligation was put upon anybody, and he felt it engendered a direct interest in employees if they felt that they were shareholders and were directly affected by the financial position of the Company. Mr. Clapham (Metals) agreed in general and wondered if some special scheme of shares of fixed value, not subject to Stock Exchange fluctuations but carrying the current dividend, would not be possible. Other speakers gave the motion their blessing but Mr. Chambers was not in favour. He appreciated the desire of the workers to become stockholders but did not like the idea that the Company should in any way be held responsible for persuading their employees to invest money in the Company. "Buy I.C.I. shares by all means if you can afford it, and if you think it is a sound investment, but do it on your own judgment, in the ordinary way, in the open market." He also pointed out the difficulties which might arise due to income tax problems and, probably due to his guidance, the motion was lost by 92 votes to 53 but, even so, the voting in favour ensured that it would be referred back to Division Councils.

On the question of the weekly bonus proposed in a resolution by the Metals Division, the Board were asked to make a weekly payment equal to service bonus to employees who were forced to retire by ill health or accident before they were 65. Dr. Cronshaw pointed out that it was really a pension by another name and suggested that it might well be left for discussion together with the other pension matters which are under consideration. But the meeting was not sympathetic. It seemed to feel that it was an example of "that little bit, how much it is" and voted in favour of the motion with only seven dissentient votes, so that goes direct to the Board without any reference back.

Finally we came to the resolution from the Nobel Division, proposed by Mr. McCall, that a Workers' Correspondence Forum be included in the *Magazine*. Mr. Keane (the Editor of the *Magazine*) was obviously worried about the suggestion and defended his case manfully. He pointed out the delays which must occur between the publication of the first letter and the replies. Also, a letter passed by him in all good faith but with a lack of detailed knowledge might be harmful to the good name of the Company and at least a month or perhaps two might elapse before the error could be officially corrected, by which time the harm would have been done. In spite of these arguments the meeting favoured the proposal and in fact the motion was carried *nem. con.*

And so we came to the end of the day. Mr. McCall in a graceful little speech thanked the Chairman for presiding, wished him success in his new position and assured him of the fullest support from every single body in the Company. The Chairman was obviously touched when he thanked Mr. McCall but both he and Mr. McCall brought the meeting to a most cheerful end by jointly insisting that Miss Webster be publicly thanked for doing so much to make the Central Council a success and also insisting that Miss Webster reply. She did, with most becoming modesty, and we all went home feeling that Central Councils are a good thing and that Scarborough is a good place at which to hold them.



# WE GO TO PRESS

By Jock Kennedy

(Manager, The Kynoch Press)



**T**HE first issue of the *I.C.I. Magazine* was in January 1928. Ever since then the *Magazine* has come out regularly each month with the exception of the last war, when it ceased publication altogether owing to the paper shortage, and of the three years after the war, when it made only a two-monthly appearance. Throughout it has been printed by The Kynoch Press at Birmingham.

In the days when the *Magazine* first appeared, house organs were something of a rarity. In fact Lord Melchett, writing in the *Spectator* in November 1927 on the organisation of the new Company, mentioned the plans for a works magazine as one of five points of major interest. He wrote: "In order to meet the worker's legitimate desire for more information as to the running and conduct of his industry, a works magazine is to be published monthly, which will also serve as a connecting link between all the workers of the combine."

The importance of the *Magazine* as a connecting link has never been questioned, and because of this the Company has never begrudged its cost. The printing conforms to the highest standards of the trade. The system we work on at The Kynoch Press is roughly as follows.

The copy as received from the editor is first of all recorded and checked in the office and then goes on to the composing department, where it is given to the readers to be prepared for setting. There the reader checks it carefully to see that it conforms in every way with the standard style and marks up any inconsistencies.

Next the copy goes to the Monotype keyboard, which looks like an immense typewriter, with sufficient keys for seven alphabets. As the operator types the copy, the compressed air mechanism punches two holes in a paper ribbon for each letter, while an automatic calculator works out for the operator the amount of space which he has to put between the words in a line to make that line end to the uniform measure.

The roll of paper produced by the keyboard forms the control for the casting machine—the machine which produces the type, all neatly set up in lines. It is a very complicated

mechanism, pumping molten metal from a pot into a water-cooled mould, casting each letter separately and then sliding it into line.

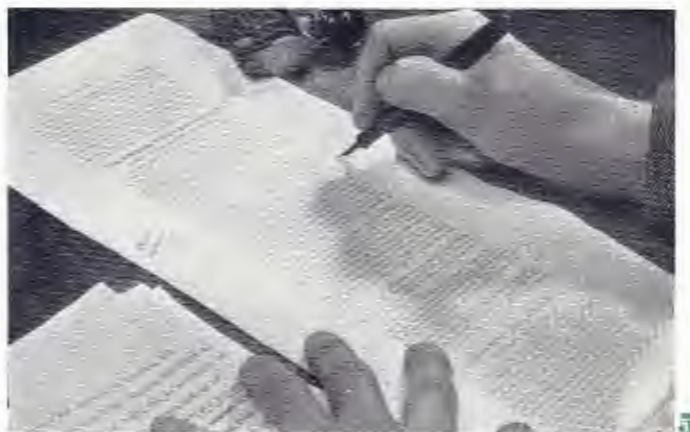
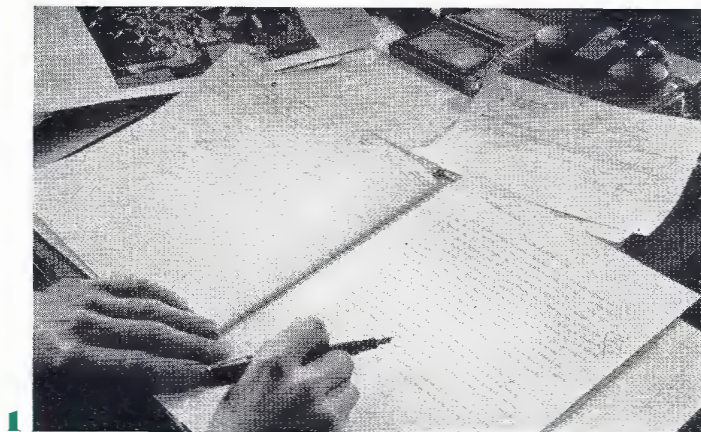
Once set, the copy is proofed in a long strip or "galley" and an opportunity is afforded the editor to make corrections. These are carried out by a hand compositor from loose type. Each line needing correction is lifted out, the altered letters are replaced, and the spaces between the words adjusted to fill the line.

Next, the compositor has to drop in the different sizes of type for headings, which have been cast separately, make spaces for illustrations, add headlines and footnotes, and insert the captions to illustrations until finally the page is completely made up. At this stage another proof is taken and submitted for approval by the editor, who thus sees the page complete with illustrations and headings in accordance with his instructions. Often he will make revisions in the layout, and this will necessitate further rearrangement before the pages of type are finally locked up in a metal frame or "chase" with spacing material around the type to form the margins—the whole nicely adjusted and measured up to make sure that the type area falls correctly on the sheet.

The forme then goes to the machine and is placed on a steel bed, which slides on roller bearings first under a pyramid of inking rollers and then under a steel cylinder round which the sheet of paper to be printed is carried. Before printing can begin, however, a very considerable time has to be spent in making minute adjustments if a perfect impression is to be obtained. When everything is ready, the sheets of paper to be printed are fed into the machine by automatic feeders which slide them off the pile on to the continuously revolving cylinders.

From the machine the printed sheets go to the bindery, where with the aid of machines they are folded and inserted into one another to make up the complete magazine. Finally they are stitched and trimmed. After this, the finished copies are examined before being packed up for despatch to the Divisions.





**1** Recording and checking copy in the office. **2** Reader preparing copy for setting. **3** Monotype keyboard operator tapping copy. The punched paper roll is seen at the top of the machine. **4** Galley of cast type on Monotype caster, exactly as delivered by the machine. **5** Reader correcting galley proof.

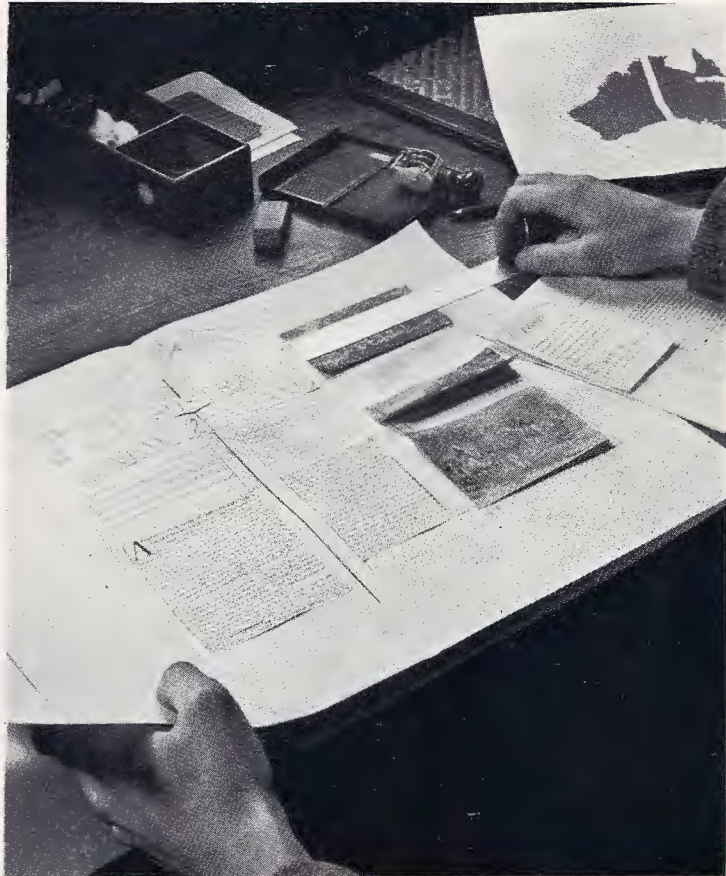


The Monotype matrix case is the heart of the Monotype system. Each little square has been punched to take the shape of a different letter. Depending upon control, as exercised by the holes in the paper roll, the matrix is moved so that the appropriate square receives the molten metal, and thus the correct letter is cast.





**6** Compositor carrying out corrections marked on galley proof.



**7** Paste-up of completed page with proofs of illustrations, text and headings arranged as they should appear. **8** Making up a display page. The assembly of intricate illustration blocks, captions and other matter requires careful positioning.



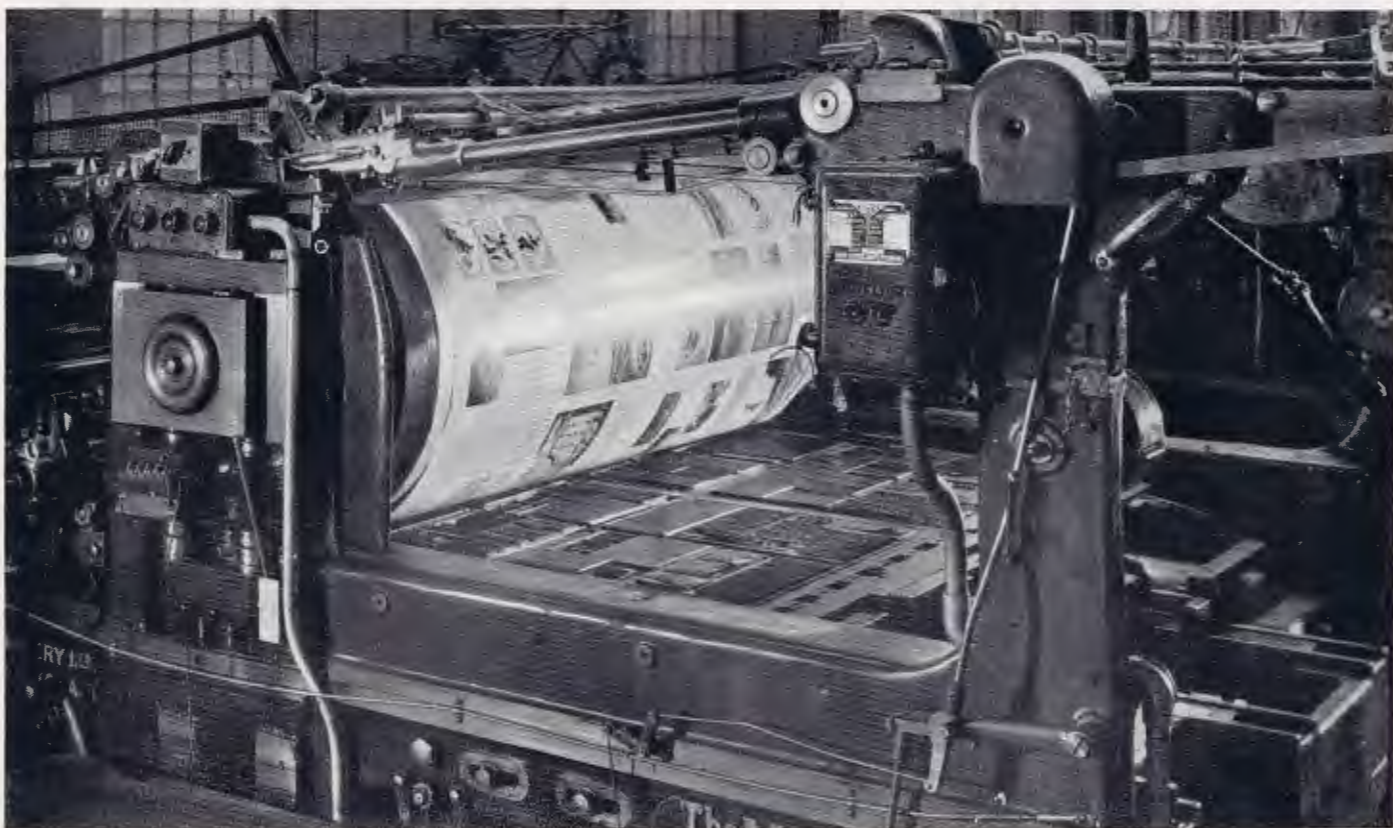




9

9 *Locking up the forme. The tension applied by tightening the "quoins" as shown must be sufficient to enable the forme to be lifted up without any piece falling out.*

10 *Forme being printed on the machine, showing the sheet passing round the cylinder after receiving an impression.*

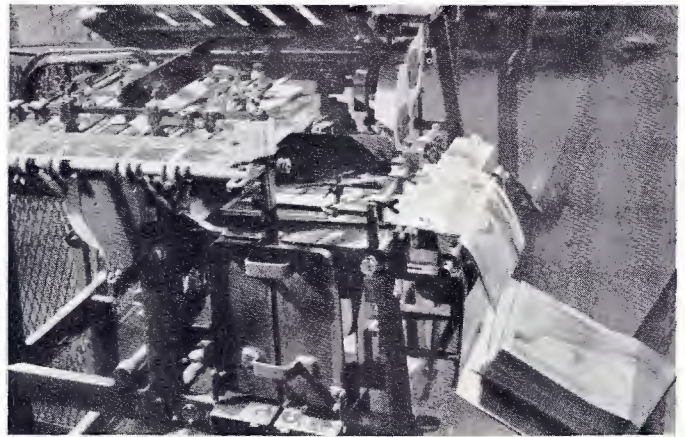


10





*A tin of printing ink. The palette knife is used to put the ink into the duct, from which it is picked up by rollers and thus transferred to the type.*



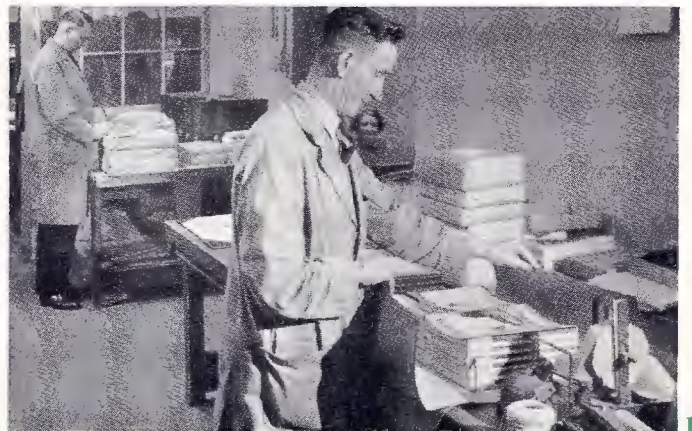
12



13



14



15



11

**11** The printer and his staff examine the printed sheet and check for errors. **12** Folding machine in operation. **13** Magazines being stitched. **14** Trimming the completed magazine. This machine trims three edges of the stitched magazine simultaneously. **15** Packing and despatching.





# Let's go Camping

By David Guttmann (Paints Division)

*Illustrated by Martin Aitchison*

**I**N the morning you can smell the freshness of the grass, listen to the birds serenade the coming day and see the glorious sun rise over the hill." With that quotation from some literary work my wife hoped to entice me into a new pastime—camping.

My wife had always been a keen camper and I had not, and believing that compromise was the secret of successful marriage, she suggested that I might share her liking for this particular sport. And as I believed myself equally filled with the spirit of compromise, I agreed to give it a trial.

Our first joint attempt at camping was, not unexpectedly, a little eventful. We set course one fine Friday night for an "official" camp site down in Surrey, only to find that it had recently been civilised with prefabricated houses. The next nearest spot listed in the handbook of the Camping Club was a greater distance away than we were willing to travel at that time of day, and as there was, in any case, no particular indication that this other site was still in existence, I decided to do what I have done many times since, namely find our own camping ground. Among the large open spaces of the Bagshot district this was not particularly difficult, and we soon selected a rather picturesque corner of a large wood, with the Bagshot-London Road on one side and the Sunningdale Golf Club on the other.



"Hold that!" said my wife, handing me a wooden pole pointed at both ends. I held it. "Don't just stand there," she said; "I want you to help me with the tent." So I dropped the wooden stick and seized a corner of the tent. "Oh, you are hopeless!"—after only five minutes at this game, mind you—"I want you to fix the pole in the tent!"

I had a distinct feeling at this point that the evening would not be a happy one, and by the time we had the tent finally standing upright of its own volition the atmosphere was very tense indeed. But before I had opportunity to reflect on this situation I was reminded that I had better go and fetch some water. Now, I have already described to you where we were, and you may recall that I said nothing about water. That was simply because there was no water. I said so to my wife. "There is bound to be a house down the road somewhere." There was—precisely one and a half miles down the road. Actually I didn't mind the walk so much; but having been given a most awkwardly shaped old canvas bucket in one hand and a silly little saucepan in the other, I did find it exasperatingly difficult not to spill most of the water from both of them; with the result that my progress was as measured as that of a batsman to the wicket—and was I on some wicket!

Having been told that I would never have been asked to fetch the water had it been known that I would spend such an



interminable time over it, I was further informed that it had become much too dark and too late to cook a meal; that I would have to be satisfied with a cheese sandwich; that it was most unfair of me to agree to come camping and then to do my best to spoil the outing; and that we would pack up the next morning and go home. With that my wife threw down whatever it was she was holding and disappeared inside the tent. Realising that no sandwiches would now be forthcoming, and having in my case no idea where the food might be, I came to the conclusion that retirement was the best plan for me also.

Some time towards the middle of that night my wife remarked laconically that it was raining. I ventured to say that I thought so too, because I was getting a little bit wet. "Don't worry about that," I was reassured; "that's only spray." I did not have a lot of time to figure out why spray should be less wetting than rain, because the next minute I was informed that the guy ropes needed slackening. I tumbled out into the miserable night to see to those wretched ropes. No, you are wrong. I knew what the guy ropes were, I did not trip over them and I did not collapse the tent; no, I did the job quite satisfactorily. What did upset me was being welcomed back with the somewhat tactless remark "Oh, you are all wet!" That was too much. "If you," I said, "can go out into a very dark night in pouring rain to slacken ropes, belts, or whatever else you feel like slackening, without getting wet, you must be something of a marvel."

There was no answer; but in the sunshine of the next morning the troubles of the rainy night were quickly forgotten. Incidentally, that morning, I witnessed the most extraordinary spectacle that I have ever seen. More astonishing than the



*... my progress was as measured as that of a batsman to the wicket*

time in Cologne when I watched some 2000 blonde German maidens, dressed in a teutonic version of French night club outfits, at midnight during a sweltering summer, offer their gratitude or something to a nazi-renovated pagan god, who I dare say was having a whale of a time hovering between the magnificent towers of Cologne Sports Stadium; or that grotesque moment in Paris last year, when the gendarme at the Place de l'Opera, trying to cope with the frightening traffic, suddenly left his little island and ran, as fast as his uniform

would allow him, to take shelter from a heavy shower of rain. But never this! Here, in this quiet wood, early on a bright Saturday morning, a fleet of coaches, bound probably for the coast, had made a halt, as these coaches have a habit of doing. And here, unaware of our admittedly unauthorised presence, the ladies had taken refuge in the woods on one side of us, while the men were on the other. We moved to a new site the same evening.

Since those early days, though, I have got to like camping, and like it more each time I go. For each time there is a new experience, a new friendship, or a new example of kindness—and always there is the open air and the close contact with nature. I remember once, when we were on our way to Oxford, trouble to one of the bikes delayed us, and by



*... and always there is the close contact with nature*





*... rich, fresh milk and delicious ice-cream, if you know the right times and the right drill*

nightfall we had only reached historic Wallingford. A ferryman there, who incidentally had brought home from the wars a beautiful Czech wife and two very sweet children, told us to ask a local market gardener, whose grounds extended to the river, whether he would let us camp for the night in his field. This gardener was only too pleased, and he and his wife came to see us later in the evening to make sure that we were comfortable. And in the morning he presented us with a handful of his best tomatoes for our breakfast.

In France one year, while making our way to Nice, we camped one night in a little village some 4000 feet up in the Savoy Alps. It had been mercilessly hot during the day, and we expected a correspondingly sticky night. Just as we were bedding down, a French couple arrived in this lonely spot also to camp. They were horrified to see that we had only one blanket each. We should be frozen to death by the morning, they exaggerated, and then promptly insisted that we use two of their down sleeping bags for the night. How grateful we were to them! The cold of that night certainly matched the heat of the day.

But what a beautiful night it was otherwise; what a glorious moon casting its shadow over the still snowy peaks and lighting up the green slopes lower down. A scene so much of another world, a world of beauty and of peace, that we were both moved to simple silence and almost to tears. And even our French benefactors, whose mobility of tongue had seemed to surpass the worst we had met in Paris, watched the scene without saying a word. I think all four of us felt that night, more acutely than ever before, how worth living life really could be.

What an unforgettable sight when we reached Nice itself! Here, at the camping-ground in "La Californie," the pennants of many nations were flying lustily in the Mediterranean breeze from 300 or so tents. What a lovely crowd of young people, surely as cosmopolitan a gathering as had ever got together! And when in the evening everyone gathered for an international sing-song to the accompaniment of the gentle waves, the message of a few hundred young voices must have been heard in the corridors and lounges of the Casino.

But when all is said and done, you need not freeze in the Alps or swelter by the French Riviera to be able to taste the pleasure of camping. Back at home, at Hurley by the Thames, for instance, which is to us as your favourite pub is to you, there you can find what it means to enrich your experience of nature, of human kindness and comradeship.

There is dear "Old Bob" at Hurley, in the employ of the Thames Conservancy but taking time off to look after his flock of campers on Hurley Island to bring them their papers in the morning, together with a cheery greeting. There is the farm near by, with its rich, fresh milk and its delicious ice-cream, if you know the right times and the right drill. There is also the East Arms, which in spite of its American bar and expensive women from the big city sells an excellent drop of bitter in the public bar, where you can also meet the handful or so of locals that are Hurley. It's a glorious spot, this, as truly an English scene as one can hope to find anywhere. To be part of this, as of nature anywhere, even if only for a weekend, is an experience, surely, that no man goes through without being a better creature afterwards.



# I.C.I. NEWS

## HEAD OFFICE

### *Major H. Y. Irwine, M.C.*

*An appreciation by Mr. S. P. Leigh, Overseas Controller*

The departure of Major Irwine, Head of the Far East Department, on retirement after more than 32 years of service with I.C.I. and its predecessors, deprives Head Office of one of its best known personalities, who had won a place in the affections of all with whom he came in contact.



Immediately after the first world war, in which he served in the Royal Artillery and gained the M.C., Harold York Irwine joined Brunner, Mond & Co. Ltd., for whom he went out to China, where he was a director of Brunner, Mond & Co. (China) Ltd. from 1920 to 1928. In 1928 he was trans-

ferred to the Board of Brunner, Mond & Co. (Japan) Ltd. and became chairman of that Company in 1929. He was called upon to carry through a comprehensive re-organisation of the Company in Japan at a time when Japanese industrial development was proceeding with its greatest intensity. He returned home in 1938 to take up the post of Head of the Far East Department.

During his years in China and Japan, Major Irwine acquired a rich store of knowledge and experience of the customs and personalities of the Far East, which have proved invaluable in the difficult years since 1938. This knowledge and experience he shared with Mrs. Irwine, who also became a connoisseur of the recondite art and lore of formal Japanese gardening, and herself laid out an outstandingly beautiful garden at the house built by the Company for its chairman in Kobe, which was, alas, completely destroyed during the Allied bombing of Japan.

Perhaps the work which most endeared him to his many friends and which was most typical of his kindliness, was that which he did during the war to ensure that the dependants of the Company's staff in all parts of the Far East, who had been evacuated before the Japanese invasion, were properly cared for, wherever they had gone for refuge and that news of their menfolk who were interned was passed on to them. This work called for infinite patience, since enquiries had to be pursued, often for months and sometimes years, before news could be

got even that some of the staff were still alive as prisoners or internees. Surely the best tribute to him is this: that if one travels anywhere east of Rangoon one cannot part from any of the I.C.I. people there without hearing the words "... and remember me to Harold Irwine when you get home, he did so much for all of us out here."

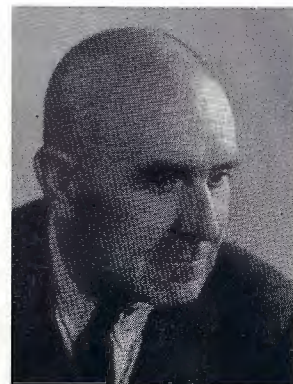
We shall miss his urbane and cheerful presence at Nobel House, but we wish him and Mrs. Irwine many years of happy and active retirement.

### *Captain C. W. Ellen, M.C.*

We record with deep regret the death of Captain C. W. Ellen (Head of Legislation Section, I.C.I. Secretary's Department). Captain Ellen died on 3rd May, in his 58th year, after a long illness.

Captain Ellen was educated at Stockton Grammar School and King's College, London, after which he joined the Middlesbrough Corporation as a pupil. He served with the Royal Engineers in the 1914-18 war (in which he lost a leg) and was awarded the Military Cross. In 1919 he became an Associate Member of the Institution of Civil Engineers. Joining Brunner, Mond & Co. Ltd. in 1920, he went to Billingham later that year on the formation of Synthetic Ammonia and Nitrates Ltd. and by 1928 was assistant chief draughtsman in the Engineering Department. In 1931 he was appointed general services manager. In the following year he was elected a full Member of the Institution of Civil Engineers. When in 1933, Synthetic Ammonia and Nitrates Ltd. became I.C.I. (Fertilizer and Synthetic Products) Ltd., Captain Ellen was appointed assistant secretary. In 1934 he joined I.C.I. Secretary's Department in London.

For many years Captain Ellen had been concerned with problems arising out of town-planning, effluent disposal, water supplies and Local Government activities affecting industry on which matters he had become a recognised expert whose advice was constantly sought and welcomed not only within I.C.I. but by other organisations. In 1946 he was appointed by the Minister of Health a member of the Central Advisory Water Committee; he also served on its sub-committees which considered prevention of pollution of rivers and





land drainage. Prior to 1939 he represented the Federation of British Industries on an advisory committee appointed by the Minister of Health to assist in the revision of the model building by-laws which was made necessary by the passing of the Public Health Act, 1936.

He will be greatly missed, not only in the department, but by his many friends throughout the Company.

*A colleague writes:*

Those who knew Captain Ellen in his earlier years in the Engineering Department at Billingham, and as assistant secretary to I.C.I. (Fertilizer and Synthetic Products) Ltd., will recall with pleasure his popular and colourful personality. He had many friends—even among the construction staff who had to interpret the drawings for which he was responsible. His energy and even temper were an example to his colleagues and made them forget (as he himself forgot) his physical disability.

He has an enduring memorial, not only in the great factory to whose early growth he contributed so much, but also in the minds of those who had the privilege of knowing him and working with him.

**Commander H. S. H. Ellis, R.N. (Retd.)**

Commander Henry S. H. Ellis, R.N. (Retd.), died on 24th May at his residence in Selsey, Sussex.

Commander Ellis had a long and prominent career in the world of publicity. From 1912 to 1919 he was assistant advertising superintendent of the London Underground Railways, serving under Mr. Frank Pick. In 1920 he joined, as advertising manager, Explosives Trades Ltd., which subsequently became Nobel Industries Ltd. On the formation of Imperial Chemical Industries Ltd. in 1926, with Nobel Industries as one of the four main constituent companies, Commander Ellis became head of the Advertising Department of the new combine, a position he held for several years. After returning to the Royal Navy for service at the Admiralty in the last war, he rejoined I.C.I. in 1945, but retired in the following year.

He was at one time chairman of the Publicity Club of London and, in addition, served for many years on the committee of the Incorporated Society of British Advertisers and was a member of the Incorporated Society of Advertising Consultants. His passing will be keenly felt by the older generation of advertising men in the metropolis.

**Agricultural and Veterinary Conference**

A conference of the agricultural staffs of the four Regions, various members of Central Agricultural Control and representatives from Jealott's Hill, Hawthorndale, Scottish Agricultural Industries Ltd., General Chemicals, Lime and Salt Divisions, stiffened by a strong contingent from I.C. (Pharmaceuticals) Ltd., was held on 2nd and 3rd May at the Spa Hotel, Buxton.

About 150 delegates forgathered on the evening of Tuesday, 1st May. The morning of the first day was devoted to a review of research, of commercial progress and of technical progress in I.C.(P) since the last conference of this nature was held in 1946. These short papers were followed by brief talks and discussions about 'Gammexane' and Dairy Detergents, the morning being rounded off with a paper on I.C.I. in Agriculture by Mr. R. A. Hamilton of C.A.C.

The first part of the afternoon was given up to a conducted

tour of Tunstead Quarry and the Small Dale Drying and Grinding Plant. After tea Mr. Flanders addressed the Conference on Lime Division products and an extremely interesting coloured film, *Coccidiosis*, was screened.

That night a formal dinner was given by I.C.(P) to the Conference at which Mr. Smith, chairman of I.C.(P), presided and speeches were made by Mr. Smith and by Mr. E. M. Fraser, sales controller of I.C.I.

Everyone was up early on Thursday, 3rd May, to hear Mr. Ferguson from Jealott's Hill on bloat. As usual, we learned more from Mr. Ferguson in twenty minutes than it is possible to do from most other people in a couple of hours. The next two papers were disappointing since the three speakers involved could only be heard with the greatest difficulty beyond about the second or third row of the huge ballroom in which the papers were delivered.

Just before luncheon the more squeamish delegates were forced to absent themselves from the proceedings since the corpses of a sheep and pig were carried into the ballroom and dissected by Mr. Harrow while Mr. Ogilvie drew attention to the presence of certain diseases and parasites. Mr. Tollitt of I.C.(P) closed the morning proceedings with an excellent review of the publicity effort made by the Pharmaceuticals Division.

After lunch there was a short paper by Mr. K. C. FitzGerald entitled "The Meaning of Meaning," which was followed by an excellent film on the use of the new veterinary anaesthetic 'Anavenol K.' It was thought by all those present that this picture, which was made by the I.C.I. Film Unit under the technical direction of I.C.(P), was certainly one of the best films ever made by the Company.

The Conference ended after tea with a discussion on general commercial matters presided over by Mr. John Cochrane, who, throughout the proceedings, had established himself as quite obviously one of the leading spirits in what must have been weeks of hard team work.

**ALKALI DIVISION**

**Northwich Urban Council's New Chairman**

Mr. Sam Williams, assistant Division safety officer and safety officer of Winnington Works, has been unanimously elected chairman of the Northwich Urban Council after being a Councillor for only five years, a tribute of the Council to what was described by one of his colleagues as his "refreshing common sense."

For the 45 years since his schooldays Mr. Williams has worked for I.C.I. and its predecessors and has accordingly won awards for 25, 35 and 40 years' service. Before coming to the Supply Department at Winnington in 1930 he was with the Electro Bleach and By-Products Company at Middlewich and when I.C.I. decided to close the works down he was in charge of the demolition. Just before the outbreak of war in 1939 he was transferred to the A.R.P. and Safety Department, becoming assistant Division safety officer in 1940.





Mr. Williams has for years devoted much of his spare time to local organisations and charities. For seven years when he was at Middlewich he was secretary of the town football club and was an active member of the Middlewich Children's Aid Society. At present he is president and chairman of the Winnington and Castle Branch of the British Legion. His interest in young people is still paramount: for some years he has served as administrative officer in the Sea Cadet Corps with the rank of sub-lieutenant.

The new vice-chairman of the Northwich Urban Council is also a Winningtonian. He is Mr. W. H. Young, a process manager at the works.

### *Champion of the Dee, Weaver and Severn*

Dennis Woodward, a joiner just out of his time, works in Area F Construction Works. Earlier this year he stroked a successful Northwich Rowing Club eight, which won the Northern Head-of-the-River race at Chester and which finished 27th out of 214 in the Putney Head-of-the-River race a week later.



(By courtesy of the Northwich Chronicle)

*Mr. Dennis Woodward*

When the regatta season started Dennis handed the eight over to Len Ackerley (Engineering Department) and went in for serious sculling. At Chester, on Whit-Saturday, he dead-heated in the final of the Championship of the Dee. Re-rowing the 1½-mile course immediately, he won comfortably. On the following Monday he emerged as Champion of the Weaver at Northwich, and on 9th June he won the Championship of the Severn at Pengwern Regatta, Shrewsbury.

Dennis came to the Alkali Division as a messenger boy in 1943 and two years later became an apprentice. Half-way through his apprenticeship he decided to take up rowing, so he presented himself at the Northwich Rowing Club for that purpose.

He has now served his time, and soon he expects to be called up for National Service, but he hopes as much as possible of his Army career will be spent near a large river—Thames, Rhine, Volga or Yalu will suit him equally well—where he can lay hands on a fine sculling boat and practise for the height of his ambition—the Diamond Sculls at Henley.

## DYESTUFFS DIVISION

### *Mr. W. H. H. Demuth*

We regret to announce that Mr. W. H. H. Demuth, chairman of Dyestuffs Division, retired, at his own request, from

the service of the Company on 31st May, for reasons of health.

After leaving New College, Oxford, where he obtained his B.A. and B.Sc. degrees, Mr. Demuth joined Brunner, Mond & Co. Ltd. as a chemist in the Research Department on 14th July, 1924. In 1925 he was appointed a plant manager at Sandbach Works. He returned to the Research Department in 1930 to take charge of general development and alkali research, and was subsequently appointed deputy research manager.

Mr. Demuth was appointed to the Alkali Group Board as development director on 14th June, 1934, and in August 1937 he became production director, which position he held until his appointment as managing director of the Dyestuffs Group Board on 1st January, 1942. He became chairman of Dyestuffs Division in December 1943.

Mr. Demuth had distinguished service in the 1914-18 war when he won the M.C. for gallantry.

### *Mr. C. H. Rowland*

Mr. Charles Rowland, Dyestuffs Division pensioner, started to make model railway engines 49 years ago when he was 18 years old and he has now built about forty of them. Five of these, in various stages of completion, were the major attraction at an exhibition of models in Crumpsall Library, Manchester, from 2nd April to 5th May. They were L.M.S. *Princess Royal* 4-6-2, 4 cylinder, and *Duchess* 4-6-2, 4 cylinder; G.W.R. No. 1000, 4-6-0, 2 cylinder; L.N.E. rebuild of G.N. *Great Northern* 4-6-2, 3 cylinder; and L.N.E. *Bantam Cock* 2-6-2, 2 cylinder.

Before his retirement from I.C.I. in March 1943, Mr. Rowland's models were made to the scale of ½ in. to 1 ft., but those built since then have been to the scale of ¾ in. to 1 ft. He usually works on five models at a time—"to avoid monotony"—and he has now started work on a new model the L.M.S. *Britannia*, No. 70000, 4-6-2. His hobby is building the models and when he has completed them he is not interested in running them on a track. Mr. Rowland first tests his models on compressed air and after satisfactory results he jacks them up and runs them on steam. All of them are coal-fired and the more powerful ones are capable of an actual



*Mr. Charles Rowland with one of his model locomotives at a recent Manchester exhibition of models*



speed of 35 m.p.h. and weigh a little over 1 cwt. Their value is rather more than £200 each.

Mr. Rowland started work in the tool room of G.E.C. in 1898 and four years later went into the motor-car trade in Manchester. He joined Levinstein Ltd. in 1906 as chauffeur and mechanic to Mr. Ivan Levinstein and after serving in the Army from 1915 to 1919 returned in 1920 to the Blackley Works of British Dyestuffs Corporation Ltd. as garage foreman. He retired, for health reasons, when he was 58 and considers that his hobby of making model railway engines helps to keep him fit. Mr. Rowland is also a keen gardener and he specialises in the growing of tropical plants.

### **Mr. Maurice Crane**

We greatly regret to announce the death of Mr. Maurice Crane, a Long Service pensioner of Dyestuffs Division.

Mr. Crane retired on 11th July, 1947, after 41 years' service with the Company. He had worked in many sheds in the Blackley Factory, and was transferred in 1932 to Research Department as a laboratory cleaner.

In the *Magazine* for May 1950 an article described Mr. Crane's unusual hobby of making models of the chemical plant he operated in his early years at Blackley Works. The article was illustrated by a photograph of Mr. Crane building a model filter-press, complete to the smallest detail.

## **GENERAL CHEMICALS DIVISION**

### **Mr. Fred Holt, O.B.E.**

Mr. Fred Holt, joint managing director of General Chemicals Division, who retires this month, has been with the Division since its formation in 1931. (It was then known as the General Chemicals Group.) Mr. Holt, always a prominent member of the Division Headquarters staff, was at first operations manager for the electrolytic and allied products. He was made a Group director in 1937, became subsequently production director and joint managing director of the Division in 1946.



No one knows Mr. Holt for long without becoming aware of the fact that he was formerly

a Castner-Kellner man. The name of that company will almost certainly crop up in conversation and Mr. Holt, in his deep tones, has a deliberate and characteristic way of speaking its name which leaves no doubt in the listener's mind of the great respect and affection that he feels for it. He joined the Castner-Kellner Alkali Company in 1915 as a research chemist and soon afterwards became their research manager, a post which he held until, in 1929, soon after the formation of I.C.I., he was transferred to the Technical Department in London.

It was during the 1914-18 war that he did some most successful and important work on war gases, in recognition of which he was awarded the O.B.E. His real love, however, has been the electrolytic process for making chlorine and caustic soda, the process that is so particularly associated with the name of Hamilton Young Castner, of whose work Mr. Holt has always been an ardent admirer. In fact, he has recently

been actively concerned with the writing of an account of Castner's life and work and he has also been largely instrumental in arranging for a reproduction of the Castner Memorial Plaque, now at Columbia University, to be placed at Castner-Kellner Works.

Mr. Holt will be greatly missed. He knows General Chemicals Division plants and chemical processes probably better than any other member of the staff. He has very many friends in every works and department, friends who will miss him not only as a wise counsellor on both personal and technical matters but also as a good companion.

His knowledge of the chemical industry outside the Division can almost be described as encyclopaedic, this store of information having been built up with the aid of an excellent memory. He is on the council of the Society of Chemical Industry, to which he was elected in July 1948.

### **Dr. John Ferguson**

Dr. John Ferguson, recently appointed Division joint managing director, joined I.C.I. at Billingham in 1928 after having spent eight years at Glasgow, Bristol and Oxford Universities and two years with the Department of Scientific and Industrial Research. His first appointment with the Company was as a research chemist and most of his subsequent career has been in the Research Department. In 1931 he was transferred to the Widnes Laboratory and a year later he took charge of the Runcorn Research Department. In 1936 he was put in charge of certain work on which the Company had been consulted by the Government. This eventually led to the activities carried out at the MS/CD factories operated by General Chemicals Division. He was appointed a Division director in 1939.



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### **Rare Award for Referee**

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After the match he was invited to attend the presentation of the trophies and, much to his surprise, was presented with a medal, from the French Government, by the Minister of Sport. He was informed that he is the first Englishman to receive this medal and that only six other persons have had this great honour bestowed upon them.

Earlier this year George Phillips refereed one of the semi-finals of the French Challenge Cup at Lyons, and last September he presided over the Italians versus St. Helens match.

And now, although the season is over, his services are still in demand. He has been invited by the Blackpool Council to referee games between Huddersfield, Dewsbury, Wigan and



speed of 35 m.p.h. and weigh a little over 1 cwt. Their value is rather more than £200 each.

Mr. Rowland started work in the tool room of G.E.C. in 1898 and four years later went into the motor-car trade in Manchester. He joined Levinstein Ltd. in 1906 as chauffeur and mechanic to Mr. Ivan Levinstein and after serving in the Army from 1915 to 1919 returned in 1920 to the Blackley Works of British Dyestuffs Corporation Ltd. as garage foreman. He retired, for health reasons, when he was 58 and considers that his hobby of making model railway engines helps to keep him fit. Mr. Rowland is also a keen gardener and he specialises in the growing of tropical plants.

### **Mr. Maurice Crane**

We greatly regret to announce the death of Mr. Maurice Crane, a Long Service pensioner of Dyestuffs Division.

Mr. Crane retired on 11th July, 1947, after 41 years' service with the Company. He had worked in many sheds in the Blackley Factory, and was transferred in 1932 to Research Department as a laboratory cleaner.

In the *Magazine* for May 1950 an article described Mr. Crane's unusual hobby of making models of the chemical plant he operated in his early years at Blackley Works. The article was illustrated by a photograph of Mr. Crane building a model filter-press, complete to the smallest detail.

## **GENERAL CHEMICALS DIVISION**

### **Mr. Fred Holt, O.B.E.**

Mr. Fred Holt, joint managing director of General Chemicals Division, who retires this month, has been with the Division since its formation in 1931. (It was then known as the General Chemicals Group.) Mr. Holt, always a prominent member of the Division Headquarters staff, was at first operations manager for the electrolytic and allied products. He was made a Group director in 1937, became subsequently production director and joint managing director of the Division in 1946.



No one knows Mr. Holt for long without becoming aware of the fact that he was formerly a Castner-Kellner man. The name of that company will almost certainly crop up in conversation and Mr. Holt, in his deep tones, has a deliberate and characteristic way of speaking its name which leaves no doubt in the listener's mind of the great respect and affection that he feels for it. He joined the Castner-Kellner Alkali Company in 1915 as a research chemist and soon afterwards became their research manager, a post which he held until, in 1929, soon after the formation of I.C.I., he was transferred to the Technical Department in London.

It was during the 1914-18 war that he did some most successful and important work on war gases, in recognition of which he was awarded the O.B.E. His real love, however, has been the electrolytic process for making chlorine and caustic soda, the process that is so particularly associated with the name of Hamilton Young Castner, of whose work Mr. Holt has always been an ardent admirer. In fact, he has recently

been actively concerned with the writing of an account of Castner's life and work and he has also been largely instrumental in arranging for a reproduction of the Castner Memorial Plaque, now at Columbia University, to be placed at Castner-Kellner Works.

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Leigh during Blackpool's Sports Week. To have control of these games is a record which proves his popularity and ability in the Rugby League world.

### *Swift Rise to Rugby League Fame*

An apprentice bricklayer at Gaskell-Marsh Works, Mr. John Broome, has been making a name for himself in the Rugby League world. John Broome's first experience of Rugby was in a seven-a-side competition played at the I.C.I. Recreation Club, Widnes, at the end of the 1946-7 season when he played for the Gaskell Formic Acid team. At the beginning of the next season he joined the West Bank team of Widnes and helped them to win three cups and remain unbeaten for that season.



In April 1948 John Broome played in France with an English Amateur team of youths under 21 years of age and in the same month signed on to play for Wigan.

His subsequent record is:

1949-50. Played for Wigan A team and won medals for the Lancashire Shield, Lancashire League Cup, Lancashire League Medal, and Rugby League Championship.

1950-1. Played for Wigan A team and won medals for the Lancashire Cup and Rugby League Challenge Cup; played for The Rest against the Australasian Tourists; played for Lancashire; played for England twice against Wales and France and so getting his cap; selected to captain a professional under-twenty-one side, but could not play because of illness; played for Great Britain against Australasia in a Festival of Britain match at Leeds.

John is a member of the third generation of a family connected with Gaskell-Marsh Works and his father and brother both work there. He expects to be called up for military service shortly, as he is almost 21 years of age.

## METALS DIVISION

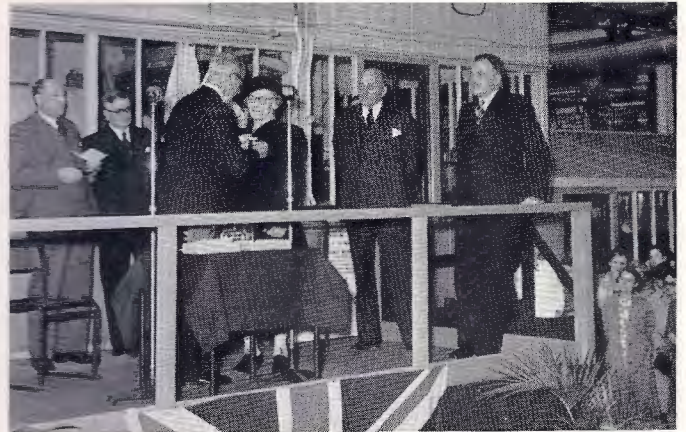
### *Visit of Lord Willoughby de Broke*

An event unique in the history of the Metals Division took place on 17th May, when the Lord Lieutenant of the County visited Kynoch Works to invest Miss Emma Middleton with the British Empire Medal. The ceremony was held in the shop where Miss Middleton has worked for 45 years, and was witnessed by a crowd of some hundreds of her friends and workmates.

The citation, read by Mr. Barry Kay of the Board of Trade, referred to Miss Middleton's indefatigable efforts to help those in distress, to her long service as a Works Councillor, and to her special devotion to the interests of young people and pensioners.

Before presenting the medal, Lord Willoughby de Broke said how pleased he was to visit Kynoch Works, for few firms could have had such an outstanding record in the production of essential goods. It was, he felt, most appropriate that Miss Middleton should have been selected for this honour, as 45

years' service was a remarkable and most commendable achievement.



*Lord Willoughby de Broke invests Miss Emma Middleton with the British Empire Medal*

Mr. H. E. Jackson, chairman of the Division, paid tribute to Miss Middleton's outstanding characteristics of unselfishness, generosity and modesty. "For 45 years she has given steady and unremitting service to her employers; in addition she has never failed to produce a sympathetic smile, a kind word or a helping hand at the right moment."

### *Almost a Half-century*

On 4th May, Fog Signal Department, Kynoch Works, said good-bye to an old friend, Mr. Albert Taylor, who was retiring after 49½ years' service with the Company. Mr. Taylor joined Muntz's Metal Co. in 1901, when he was 15. In those days he worked from 6 in the morning to 5.30 in the evening for the sum of 6s. 7½d. a week. For the last 20 years he has been a scalesman in Fog Signal Department.



*A group taken at the presentation ceremony before Mr. Taylor's retirement*

Albert's motto for a happy working life is "always to do a little bit more than you are paid for." By applying this principle he has achieved an enviable reputation for willing and efficient service, and the respect and affection of a host of colleagues.

Mr. G. Ewins (production manager) presented Mr. Taylor with a "Heatmaster" tea-set, and an electric kettle and toaster,



gifts from colleagues in the department, which carried with them many good wishes for a long and happy retirement.

### *An International Skater*

Walter Webb, a 20-year-old apprentice in the Fitting Shop, Kynoch Works, was a member of the English team in the International Ice Speed Race meeting at Richmond on 12th May. He was the youngest of the team's six members.

Walter is a member of the Birmingham Mohawks Ice Speed Skating Club, and was included in their team which won the three miles relay championship of Great Britain earlier this year. He also skates for the Mohawks' Black Wings team, who lead the National Ice Racing League.

## NOBEL DIVISION

### *Pensioners' Reunions*

Nearly 600 retired employees and their wives were the guests of the management at two dinners followed by concerts held in the Ardeer Recreation Club Hall on 4th and 11th May.

On 4th May, Mr. J. E. Lambert, Division production director, was in the chair. He referred to the occasion as "kindly, with a quality all its own" and said that the Company was grateful to those who had served it so well for so many years and now enjoyed richly earned retirement. He was encouraged to see the obvious good spirits of the pensioners and it was good to join them for an evening.

The following week, Dr. J. W. McDavid, Nobel Division chairman, presided. He said that each of the retired guests had made a contribution to the present health of the Division, and that they had set an example that was being followed.

The concert programmes which followed the two dinners were of high quality, and guests had two happy evenings in the pleasant company of old friends exchanging reminiscences of their workaday experiences.

### *River Rescue*

Mr. Thomas Maxwell, a processman in the Spinning Department of the Dumfries 'Ardil' Factory, rescued a small boy from drowning in the river Nith on the afternoon of Thursday, 3rd May. On this day the Nith, which passes through Dumfries on its way to the Solway Firth, was very high and much discoloured.



Two boys, coming home from school, paused on the wall of a mill dam, which is fed by the river, and one of them fell in and was struggling in deep water. His friend raised the alarm among householders nearby and a lifebelt was thrown to the boy, but, over-

come with shock and cold, he was unable to use it and he sank.

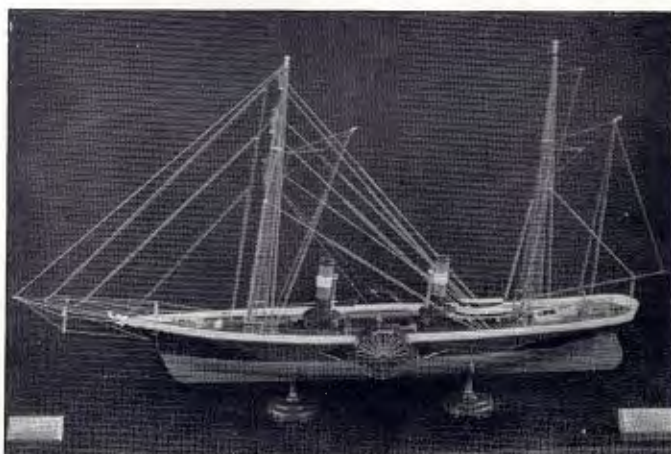
Mr. Maxwell began to undress, but when the boy sank he changed his mind about diving into the water, which was so dark that search would have been impossible. Instead he found a long grappling pole with which he tried to drag.

The other boy, who had kept his head, noticed some air bubbles coming to the surface, and Mr. Maxwell was able to locate the lad and bring him to the bank. Artificial respiration revived him and, after treatment at the Dumfries and Galloway Infirmary, he was allowed to go home not permanently the worse for his adventure.

### *Restoration of Old Model Steamer*

Members of the Model Engineering Section of Ardeer Recreation Club are proud of their renovated model of the S.S. *Bendigo*. It sits, with its paint fresh and gleaming, protected in a glass case, on a table in their workshops. The model is a faithful and handsome scale replica of the paddle-steamer of that name which was launched in 1863. The *Bendigo* had an overall length of 162 ft. and was of 259 tons gross weight, and the model, which is some 80 years old, and must be one of the oldest working models of a steamer in existence, measures 3 ft. 9 in. from stem to stern and has a beam of 7 in. between the paddle-boxes.

During its long life the *Bendigo* had no doubt many adventures, not all of which it had survived without damage. When it came into the ownership of the club in 1950 there was much to do before it could be restored to its former beauty.



*The restored model of the S.S. Bendigo*

Two members of the Model Engineering Section devoted happy and absorbing leisure hours to the task.

The restoration of the hull and rigging was done by Mr. Alex Crawford, of Ardeer Fire Station. Mr. A. Hall, a fitter in Ardeer, overhauled the boiler and engines.

The workmanship on the model is thorough. Hull and deck were cleaned down to the metal and repainted; bulwarks were renewed; boiler and engines were completely overhauled. Deck fittings, such as companion ways, rails, davits, anchors and hawse pipes were damaged or missing. These were replaced. Paddle and paddle-boxes were repaired. All the masts and spars were cleaned and re-varnished and a simplified rigging fitted to conform with the style of the transition period from sail to steam. Many fittings and blocks, mast bands, belaying pins, spar-trusses, gaff and goosenecks were made. Two small lifeboats, fully equipped with oars and boat skids, were constructed.

The work was a real labour of love and an exercise in craftsmanship that has brought pleasure to many admirers in



the section workshop and charmed modellers from all over the Lowlands of Scotland who visited the recent Ardeer Recreation Club Model Engineering Exhibition.

One small plaque in the showcase tells how the S.S. *Bendigo* came to Ardeer and another gives some particulars of the original ship.

### *Broadcast Team at 'Ardil' Factory*

On 1st June the outside broadcast team of the B.B.C. Scottish Region visited the 'Ardil' Factory at Dumfries and recorded a twenty-minute feature programme which went on the air on Saturday evening, 2nd June.

The interviewer and commentator were Mr. James Buchan and Mr. Jameson Clark, who gave listeners to the Home Service a word picture of 'Ardil,' what it is, what it is used for and how it is made. On the site they interviewed Dr. A. G. White and Dr. D. Traill, then followed the progress of the groundnut through the stages which produce 'Ardil' protein fibre.

By questioning experts along the production line the story was built up. Among those who broadcast were Dr. Ray Campbell, production manager, Dr. W. Tetlow, plant superintendent, Mr. Tom Cowan, who works on the process, and Mr. James Nichol, who spoke about woollens and 'Ardil.' As listeners set out on this tour, Mr. William Jenkins, of the British Extracting Company, described how arachis oil for margarine manufacture is removed from the groundnut before the meal is sent to Dumfries.

Then as the broadcast ended Mr. James Buchan had a talk with Miss Jean Reid, who was able to assure him that her smart 'Ardil'-wool blend suit was wearing just as well as it looked.

### *Festival of Britain Shooting Medal*

At a Festival of Britain miniature rifle meeting held in Rouken Glen, Glasgow, in May, Mr. J. S. Young, Ardeer Rifle Section, shot well and true. His marksmanship gained the top award of the meeting along with the Festival of Britain Silver Medal and a prize worth £15.

## PAINTS DIVISION

### *Paints Representative Plans Village Festival*

For the last few months Mr. H. L. Shearn, I.C.I. Southern Region paints representative, who lives at the village of Lenham, in Kent, has been the busiest man in the village. All



(By courtesy of The Kent Messenger)  
*Mr. H. L. Shearn (seated) planning Lenham village festival*

his spare time has been occupied with his work as honorary organiser of Lenham Annual Carnival on 7th July.

Remembering the success of Lenham's annual carnival last year, which Mr. Shearn also organised, the B.B.C. sent a Mobile Recording Unit to the village to eavesdrop on a meeting held to plan the carnival and Mr. Shearn's voice was recorded when, as chairman of the meeting, he introduced Sir Garrard Tyrwhitt-Drake, the big-game hunter and broadcaster.

B.B.C. producer Michael Barsley picked on Lenham as a village where the spirit of Merrie England lives on. During May and June voices of many of the inhabitants of this old-world village were heard on the five 30-minute broadcasts featuring the lighter side of the Festival year.

Mr. Shearn plans a village festival for Lenham which will follow the 1851-1951 theme and illustrate a century of progress in town and countryside. There will be all kinds of entries to show contrasts between the different periods.

### *Man with 16,000 Stamps*

The stamps in the photograph below have been issued in Jamaica to commemorate the foundation of the University College of the West Indies, which has been finished throughout in 'Dulux' materials provided by Paints Division. The sixpenny stamp shows Princess Alice, Countess of Athlone, Chancellor of the University, and the twopenny stamp is the University coat of arms.



The stamps were received by Division Export Department, Slough, whose daily collection of stamps would produce covetous glances from the many stamp enthusiasts in the Division if they had the chance of seeing them.

The list of stamp collectors in Paints Division is quite impressive. Outstanding among them is probably Mr. B. C. Taylor, Southern Region Paints Representative, whose collection of Danzig stamps is internationally famed, and who is a Fellow of the Royal Philatelic Society and a member of the Postal History Society.

Another collector is Mr. T. R. Greig (Division Production Dept.), who has some 16,000 stamps in the collection which he started as a schoolboy. Mr. Greig strongly believes in the educational value of stamps, particularly so far as history and geography are concerned. Presumably with this in mind, he recently presented Peter Jenkins, son of Mr. E. F. Jenkins, Paints Division Industrial Sales Control Manager, with some 500 stamps to start him off on a stamp career.



Mr. L. D. Stewart, Paints Division Home Sales Control Manager, has a special collection of Jamaican and Netherlands stamps.

Mr. L. A. E. Moss, of Paints Division's Smethwick factory, has a specialist collection of Egyptian stamps, and he is also a member of the Philatelic Society of Birmingham.

FOOTNOTE: Dyestuffs Division supplies a large quantity of dyes and pigments to printing ink makers for use on postage stamps.

## CENTRAL AGRICULTURAL CONTROL

### *I.C.I. Grassland Conference*

"Grass: the mainstay of the stock farm" was the subject of a highly successful conference held at C.A.C.'s Dairy House Farm, Middlewich, Cheshire, on 19th May. Some 400 leading agriculturists from Great Britain and Northern Ireland, together with representatives from Eire, Holland, New Zealand, Norway, Sweden and the U.S.A. attended.

Sir James Scott Watson, chief scientific adviser to the Ministry of Agriculture, took the chair. Papers were read by Mr. A. S. Cray, farming Southdown Farm, Medstead, Hants, and Mr. J. R. Barron, farming Findowrie, Brechin, Angus. Professor H. G. Sanders of Reading University opened the discussion, in which several members of the audience participated, and Sir James Scott Watson summed up. The afternoon was spent in conducting parties round the "nitrogen" and "no nitrogen" sections of Dairy House Farm.

Sir James Scott Watson pointed out that grassland improvement is the cornerstone of the agricultural expansion programme. He stressed the improbability of rationed feeding-stuffs being as available this year as last year and urged farmers, in their own interests, to make more intensive use of their grassland and not to indulge in the false economy of neglecting to use adequate quantities of fertilizers.

The three guiding principles emphasised by Mr. Cray, in a paper of outstanding excellence, were maintain fertility, avoid doing damage to pastures by winter stocking, and practise rotational grazing. Mr. Barron endorsed Mr. Cray's views and emphasised that, in his opinion, grass drying and silage making were preferable to haymaking.

The luncheon was presided over by Mr. F. C. O. Speyer, who made a speech of welcome to the visitors, to which Mr. H. C. Cole Tinsley, vice-president of the National Farmers Union, responded. Mr. R. A. Hamilton explained the aims and objects of the farming experiments being carried out on the three C.A.C. farms.

Congratulations are due to the Northern Region Sales Office for the excellent arrangements for the conference and to the Alkali Division, who did the catering and who are also to be thanked for putting up the principal guests at Winnington Hall and entertaining them at dinner on the evening before.

## SALT DIVISION

### *Success in Scottish Reliability Trial*

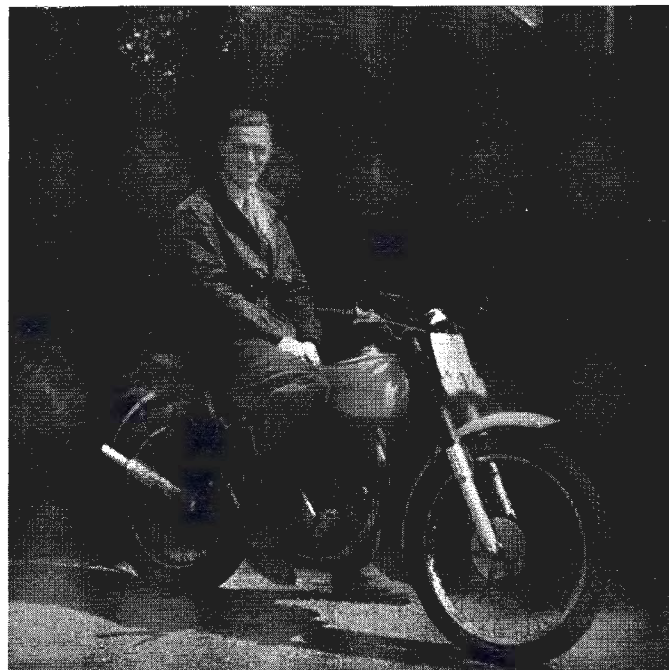
Mr. Tom Copeman, of the Drawing Office, Winsford Works, won a first-class award at this year's Scottish Six Days Open Reliability Trial, organised by the Edinburgh and District Motor Club. Riding his 490 c.c. Norton, Tom Copeman improved on the high standard of his riding in the same trial last year when he qualified for a second-class award. He

represented his own club, the Winsford and District Motor Club, of which he has been a prominent member for several years.

In the trial, one of the most arduous and exciting in the motor-cyclists' calendar, 147 competitors took part.

On the first day, riding through 182 miles of specially chosen rugged country between Edinburgh and Fort William, Mr. Copeman lost only 22 marks. Some experienced riders had to concede 50.

For the next four days the competitors set out daily from Fort William along varying routes averaging 145 miles, calculated to test riders and machines to the utmost.



*Mr. Tom Copeman*

On the sixth day, the riders made the return journey to Edinburgh.

Mr. Copeman's worst moment in the trial was when a shortage of petrol brought him to a halt in a lonely district, but a kindly Scottish farmer filled his tank for him and set him on his way again. His total loss of marks throughout the competition was 120. This earned him a first-class award.

## AUGUST MAGAZINE

The Wilton Adventure 1946-51 is the title of our main article in which Dr. J. W. Armit, chairman of Wilton Council, reviews the results achieved at Wilton during the last five years. His article is accompanied by some fine camera studies taken by the Kynoch Press photographer Charles Wormald, who also contributes to the same issue a lively account of the Outward Bound Sea School. His photographs illustrate vividly the hardy open-air life that I.C.I. apprentices lead there on their 26-day course.

Our two other articles are both in their way unusual accounts of human endeavour: C. S. Loughnane, now Pharmaceuticals Division representative in Baghdad, describes what life is like in tough Alaska; and Sam Rockett gives the inside story of swimming the Channel.





A visit to

# THE ANDES

By L. H. F. Sanderson  
(Central Staff Department)

**T**HE offer of a week-end visit to Cusco, deep in the Andes, "millenarian city" and cradle of the Inca civilisation, was irresistible—the more so since it was to be made under the personal direction of Mr. W. L. C. Tweedy, head of our organisation in Peru and a scholar and botanist of no mean order. Before the days of air travel the journey from Lima was a matter of a fortnight or more by ship, train and pack-horse. Now it is a mere 300 miles as the plane flies. Leaving the mists of Lima behind (Lima spends many months of the year without a peep at the sun), the flight over and among the snow-covered and jagged peaks is majestic beyond description. It is also not a little frightening. It seems that there cannot in the narrow valleys possibly be enough flat space for even the most modest airstrip.



*"... the population consists largely of so-called Indians, primitive alike in appearance, dress and method of life"*



THE CATHEDRAL AT CUSCO, completely destroyed by earthquake soon after the author's visit

Cusco was a great surprise to me; it is a big city with cathedral, university, churches, convents and a wealth of painting and architecture. And everywhere there are the mighty stones of the original Inca buildings, on many of which medieval and later Spanish houses have been superimposed.

Nowadays the population consists largely of so-called Indians, primitive alike in appearance, dress and method of life. With slight misgivings the visitor notices in the cathedral votive offerings to "Our Lord of the Earthquakes." Earthquakes of varying degrees are more or less the normal background of life on the west coast of South America. They are certainly a strong influence on its architecture, which has always to be designed with one eye on unpleasant possibilities.

It is sad to record that some few weeks after my visit the great city of Cusco appears to have been struck by an earthquake of quite unusual ferocity. A few weeks are as good as the proverbial mile, but it seemed rather less when I learned that an earthquake of such magnitude last took place in 1650. That earthquake is reported to have lasted only "the time it takes to say two credos." This recent one apparently was sharper still. It seems that the great Inca foundations and stones withstood the shock, which is not surprising, and that the later Spanish buildings suffered most; even so, much irreparable damage was done, particularly to the beautiful Temple of the Sun—the highest divinity of the Incas. Mr. Tweedy has given me a sad picture of the Indians praying and sobbing before Our Lord of the Earthquakes day and night—hoping against hope, rather like the inhabitants of a bombed city.





MACHUPIJCHU "... a Pompeii but on a great mountain and surrounded by still higher peaks"



LE IGLESIA DE SAN MARCELO, LIMA: a striking example of Peruvian architecture

I had time too to visit Machupijchu, only some 65 miles from Cusco but a matter of four or five hours in what the guide-book non-committally describes as a "special rail wagon" but which is in fact an ancient motor-bus adapted for the railway. Neither speed nor comfort was its watchword, and only the better sailors among its passengers could enjoy to the full the majestic scenery.

### *Reward for Exertion*

On arrival there was a  $2\frac{1}{2}$ -mile steep climb to the city—and what a reward for so little exertion! Here indeed is a Pompeii, but on a great mountain and surrounded in every direction by still higher peaks. It is strange to think that Machupijchu—with its ruins of palaces and places of worship, streets of houses and forbidding fortresses—was only discovered by Hiram Bingham's archeological expedition as recently as 1912. Here more than ever is evident the amazing skill of the Incas in cutting (presumably by the most primitive means) enormous stones and monoliths with a precision which is difficult to describe. Suffice it to say that nowhere is any mortar or binding material used, yet it is impossible to insert a penknife blade between the stones. Not that these are by any means regular in size or shape, for there is one well-known





**INCA RUINS** at Fortaleza de Sacsayhuaman, Cusco

(Photos by courtesy of the Peruvian Embassy)

stone which has twelve corners, and yet, with its fellows, it completely meets the "penknife test."

On the other hand, these Inca ruins differ disappointingly enough in one important respect from most ancient ruins: they are completely innocent of any inscriptions or carvings, in sharp contrast to those of Egypt. Add to this that the Inca method of recording and communication is said to have been a system of knots in string, and it is not surprising that there are gaps in Inca history.

### *Hitchhike by Plane*

We were fortunate enough to thumb a lift by plane from Cusco back to Lima twenty-four hours earlier than we had expected. Among our fellow guests at the hotel was the head of a well-known American airline for whom a private plane was to be sent from Lima; he was kind enough to offer seats to Mr. Tweedy and myself. After flying through heavy rain and mist we arrived without incident at Lima—presumably to the considerable surprise of the air control authorities. Perhaps this happy landing justified a celebration, but the notice in the hotel was forbidding and ominous: "The consumption of drinks not acquired in the Hotel will be charged according to special cork."



**MACHUPIJCHU CITADEL:** a near view of some of the ruins





*Ralph's Cross—a landmark of the Cleveland Hills*

*Photo by A. Walker, Billingham*